EXHIBIT 5

UNREDACTED VERSION OF DOCUMENT SOUGHT TO BE SEALED

EXPERT REPORT

ERIK LAYKIN

September 7, 2017

U.S. DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA (SAN FRANCISCO)

CIVIL CASE NO.: 3:17-cv-00939-WHA

WAYMO LLC,
Plaintiff,
v.
UBER TECHNOLOGIES, INC.;
OTTOMOTTO LLC;
OTTO TRUCKING LLC
Defendants.

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Subject to Revision
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1   ***Phase II***

2   Google began a second phase of its investigation in the summer of 2016, with direction from

3   litigators from the firm Keker & Van Nest LLP (Keker).[18] It was only in this second phase where

4   I saw for the first time discussions about preservation of documents and information.[19] This phase

5   of the investigation expanded to a review of data and information relating to downloading of files

6   and use of removable media.[20] This included a review of various log files, including logs tracking

7   activity on Google's network. Some of the log data reviewed for Levandowski included Google

8   Drive Logs and Bit9/Santa/Linux logging.[21] It is my understanding that Waymo has only provided

9   the log data for Levandowski that its investigator, Gary Brown, "relied upon" to form his

10   conclusions that Levandowski downloaded 14,107 files from Google's SVN server. Thus, I do

11   not believe Waymo has produced any log information that its investigators may have reviewed

12   and disregarded.

13   In September, 2016, Google's investigation team led by the attorneys from Keker began to review

14   logs relating to Mr. Levandowski's activities on the SVN server. In discussing the SVN server

15   and reviewing log data provided to him by the SVN administrator, Tom Gorman, an attorney from

16   Keker, noted that Levandowski accessing the SVN server only on December 11, 2015 was "a little

17   strange, isn't it?"[22] Gorman was told by the SVN administrator that the SVN data only went back

18   to September or October 2015 because it was only preserved for 52 weeks—*i.e.* only about four

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[18] WAYMO-UBER-00086812
[19] WAYMO-UBER-00086829 at 86832
[20] Id.
[21] See WAYMO-UBER-00083684; cite to Gudjonsson/Brown for relevant logs
[22] WAYMO-UBER-0086885.

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1   months of Levandowski's time at Google.[23] Despite the limited data available, Gorman proceeded

2   to email Brown and Gudjonsson and informed them on October 6, 2016 that Levandowski had

3   only accessed the SVN server on December 11, 2015 and that "it wasn't part of his normal

4   workflow."[24] Gorman also appeared to provide an SVN Log to Google's investigators, who had

5   asked him for the source of the information and his conclusions. Kristin Gudjonsson, one of the

6   investigators, later that day stated that he now believed that because the log data shows

7   Levandowski downloading the SVN client suggested that this was his first visit, as suggested by

8   Gorman. Based on further discussions, they conclude that during that session, Levandowski's

9   computer "synced" to the SVN server, which would cause it to download the repository of

10   documents available to him.

11   A problem with beginning to review log data five or six months after Levandowski's departure is

12   that a forensic examination is a battle against time. Data stored on computers used in an enterprise

13   is often perishable and in a constant state of change. The integrity of evidence often depends on

14   the ability of the forensic examiner to capture and preserve data before it is altered by computer

15   systems or human activity. For example, Google itself "sanitizes" (which basically amounts to

16   corrupting) IP addresses of collected logs by deleting digits after a given period of time.[25] This is

17   an example of the possible decay of information over time that is impressed upon computer

18   forensic examiners throughout their training to capture or preserve data before it is corrupted,

19   deleted, or modified. The loss of the SVN data is significant as there is insufficient data to

20   determine whether Levandowski had accessed the SVN server at other times. The evidence

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[23] WAYMO-UBER-00086885.
[24] WAYMO-UBER-00086893 at 86895.
[25] Brown 30(b)(6) Deposition, pp. 203-205.

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1   currently available is that Levandowski was provided with access credentials to the SVN and that

2   his access to the server would not have raised any alarm bells for the SVN administrator.[26]

3   Based on the information regarding the SVN server, Waymo began to prepare a claim for

4   misappropriation of trade secrets. However, in preparing their claim, Waymo's investigative team

5   ignored context provided by the SVN administrator. In responding to a request to provide a count

6   for the number of documents and gigabytes downloaded when Levandowski's computer

7   synchronized to the SVN server, the SVN administrator stated,

8   "I'm a little leery because both of those numbers aren't really

9   meaningful in any narrative. It also has a chilling effect on being a

10   hardware engineer – we do full checkouts and it makes me

11   uncomfortable to think that lawyers are trying to ascribe suspicion

12   to it."

13   Waymo ignored this context, and other available information, and proceeded with litigation based

14   on the conclusions from its forensic investigation.

15   **Discovery Relating to the SVN Server**

16   As demonstrated above, central to the claims made by Waymo and to the investigation is the usage

17   of an SVN server by Levandowski. Based on the record, Google failed to preserve critical SVN

18   server data evidence from the period of March 2015 to September 2015, a period during which

19   Levandowski likely had valid credentials which were issued to him by the SVN administrator.[27]

20   Had Google had in place a comprehensive preservation protocol prior to its investigation in

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[26] WAYMO-UBER-00047600; WAYMO-UBER-00047599; WAYMO-UBER-00086885.
[27] Brown 30(b)(6) Deposition, pp. 224-229.

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1   **VIII.   GOOGLE'S INVESTIGATION WAS FLAWED**

2   Google Security Engineering Manager, Michael Janosko, stated that "Google's security team

3   actively monitors access patterns and investigates unusual events" and that Google "limits and

4   actively monitors the activities of employees."[72]   Although Google claims it "invests heavily in

5   securing its infrastructure with many hundreds of engineers dedicated to security and privacy," it

6   also alleges that a high-ranking engineer allegedly walked out undetected, with several thousand

7   documents.[73]   These two claims contradict one another.

8   As I will describe below, Google/Waymo's inadequate tracking protocols along with the biased

9   and incomplete investigation of Levandowski did not sufficiently monitor or seek out important

10   potentially exculpatory information and did not determine whether Levandowski's actions were

11   unusual for him or for other Waymo employees.

12   It is inaccurate and potentially misleading to say that the state of the art network security systems

13   described by Janosko were in place at Waymo. These systems described by Janosko, which are

14   managed by ▮▮▮▮▮▮▮ security engineers and represent a major multi-million dollar investment

15   were in place at Google proper. Waymo, on the other hand, was only partially on the Google

16   network (for email, Google drive, hardware) and it is clear that the SVN repository is not subject

17   to the ordinary Google protections.[74]

18   The Janosko Declaration contains a discussion of Google's information security practices, some

19   of which exceed industry best practices. However, that declaration is largely irrelevant as the SVN

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[72] Janosko Declaration, pp. 2-3.
[73] Janosko Declaration, p. 4; Brown Declaration, p. 4; Brown 30(b)(6) Deposition, p. 49.
[74] Janosko Declaration pp. 3-4; Janosko Deposition pp. 3, 5-7, 16-17 ; Gudjonsson Deposition pp. 185, 190.

1   server was not subject to those protections: "[T]he SVN repository is not part of the network

2   systems described above. . ."   This statement found on the last page of the declaration renders all

3   of the security protections he described earlier irrelevant except to contrast the protections

4   available to other Google information and not the SVN server. Comments like: "███████████

█   ██" are irrelevant

6   given that this technique was not applied to the SVN server and engineers on the Chauffeur team

7   had the ability to and regularly downloaded large amounts of data from SVN without raising a

8   single red flag. Janosko confirmed at his deposition that the SVN server was outside nearly all of

9   Google's security network.[75]

10 Furthermore, Janosko clearly stated that he had no personal knowledge of the SVN server and had

11 never accessed it himself.[76] His knowledge of the SVN server was provided entirely by the SVN

12 administrator, Sasha Zbrozek, from whom Google did not submit a declaration.

13 Waymo alleges that the improper downloading by Levandowski occurred on December 11, 2015.

14 In his deposition, Brown testified that the earliest investigation of log sources by Waymo occurred

15 either in August, September or October of 2016.[77] Waymo later confirmed that SVN log data was

16 not available before September 19, 2015.[78] This automatic destruction of relevant log data is

17 highly prejudicial. Further, it appears from the record that Waymo didn't begin any investigation

18 of the Apache server logs for the SVN repository until prompted by Google's outside attorney,

19 Tom Gorman, after his own inspection of Apache server logs for the SVN repository. At Gorman's

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[75] Janosko Deposition pp. 5-7.
[76] Janosko Deposition, p. 8.
[77] Brown 30(b)(6) Deposition, p. 50.
[78] Waymo's Interrogatory Responses No. 23.

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1   direction, apparently, Brown pursued corroboration of Gorman's conclusions, notably without a

2   copy of the SVN log.[79] In February of 2017, Gudjonsson and Brown were advised by Gorman that

3   Apache server logs tracing SVN activity were available (although true SVN logs do not appear to

4   exist because actual logging capabilities were not activated on Waymo's instance of SVN).[80]

5   As a consequence of Waymo's policy of destroying log files after one year, the delays cited above

6   also had the effect of removing forever the ability to examine Apache server logs before

7   approximately September 2015.[81] These delays have a grievous impact on present efforts to assess

8   just how unusual or normal Levandowski's actions in December were compared to those of the

9   ten preceding months. This further applies to any comparison of the actions of other contributors

10   to the Chauffeur project in the same time period.

11   A.   Forensic Examination Sufficiency

12   I have reviewed the depositions of Brown and Gudjonsson, the Machine Forensic Record they

13   jointly produced, and other materials they are relying upon as evidence in this matter. I have

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[79] Brown 30(b)(6) Deposition, p. 51.

[80] Brown 30(b)(6) Deposition, p. 50 ; WAYMO-UBER-00086893

[81] Brown 30(b)(6) Deposition, pp. 224-229. Based on the evidence that I am aware of, it is uncertain when the autodeletion policies regarding the Apache Server logs were suspended. In Gary Brown's 30(b)(6) deposition, he testified that the 52-week data retention period for the Apache Server logs was suspended in the fall of 2016. *See* Brown 30(b)(6) Deposition, p. 145, 225. However, in a July 18, 2017 email from Waymo attorney, Jeff Nardinelli, he indicated that on March 27, 2017, "Waymo instituted a full retention policy of the SVN logs. As a result, Waymo retained the full 52 weeks of SVN logs available as of the date and continued to retain them. Due to a technical issue, data was not preserved from roughly March 27, 2017 to May 24, 2017, but the logs otherwise continue to be preserved. " *See* Brown 30(b)(6) deposition Exhibit 1317. At his deposition, Mr. Brown was shown a copy of Mr. Nardinelli's email and asked about its apparent contradiction of his testimony, Mr. Brown indicated that Waymo was unsure when the autodeletion of Apache Server logs was suspended.

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1   I RESERVE THE RIGHT TO SUPPLEMENT THIS REPORT AND TO REVISE MY

2   CONCLUSIONS TO ACCOUNT FOR ANY NEW INFORMATION THAT MAY BE MADE

3   AVAILABLE BY THE REPRESENTATIVES FOR THE PLAINTIFF, DEFENDANTS,

4   THEIR COUNSEL, OR ANY OTHER SOURCE.

5

6   I declare under penalty of perjury under the laws of the State of California, that the foregoing is

7   true and correct.

8   Executed this 7th day of September 2017 at Los Angeles, California.

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12   _____

13   ERIK LAYKIN

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